In the Claims:

1. (Previously presented) A wafer manufacturing apparatus comprising:

a susceptor including a support for a wafer, the wafer including a topside and a bottom side;

at least one optical fiber connected to the susceptor so that radiation from the bottom side of the wafer can be monitored;

an optical signal measurer coupled to the at least one optical fiber, the optical signal measurer generating an electrical signal responsive to the radiation measured from the bottom side of the wafer; and

a control system that maintains a temperature of the wafer to keep the electrical signal constant during a deposition cycle.

2. (Previously Presented) The wafer manufacturing apparatus according to Claim 1, wherein two optical fibers are connected the susceptor, a first optical fiber being located near a center of the susceptor and a second optical fiber being located near an edge of the wafer.

3. (Previously Presented) The wafer manufacturing apparatus according to Claim 1, wherein the optical signal measurer filters an optical signal from the at least one optical fiber, converts the filtered optical signal into the electrical signal and provides the electrical signal as a feedback control signal to the control system.

4. (Previously Presented) The wafer manufacturing apparatus according to Claim 1, wherein the at least one optical fiber is inserted into a hole in the susceptor to access the bottom side of the wafer.

5. (Previously Presented) The wafer manufacturing apparatus according to Claim 1, wherein the at least one optical fiber comprises sapphire.

6. (Previously Presented) The wafer manufacturing apparatus according to Claim 1, wherein the at least one optical fiber comprises quartz.

7. (Previously Presented) The wafer manufacturing apparatus according to Claim 1, wherein the optical fiber is integrated in a structure that supports the susceptor.

8. (Previously Presented) The wafer manufacturing apparatus according to Claim 1, wherein the susceptor includes a rotating part and a stationary part.

9. (Previously Presented) The wafer manufacturing apparatus according to Claim 8, further comprising a thermocouple or a pyrometer arranged to measure a temperature of the susceptor.

10. (Previously Presented) The wafer manufacturing apparatus according to Claim 8, wherein optical signals from the at least one optical fiber couple to the optical signal measurer via a stationary monitoring device.

11. (Previously Presented) The wafer manufacturing apparatus according to Claim 2, wherein the optical signal measurer generates a first electrical signal from radiation monitored from the bottom side of the wafer by the first optical fiber and the optical signal measurer generates a second electrical signal from radiation monitored from the bottom side of the wafer by the second optical fiber, and wherein the control system maintains a temperature of the wafer at the center to keep the first electrical signal constant during the deposition cycle and the control system maintains a temperature of the wafer at the edge to keep the second electrical signal constant during the deposition cycle.

12. (Original) A method for manufacturing a wafer using an epitaxy process, the method comprising the steps of:

receiving an optical radiation signal from a backside of a wafer;

filtering out a spectrum of the radiation signal for which the wafer is opaque;

converting the filtered radiation signal into an electrical signal;

and controlling a wafer temperature by keeping the electrical signal constant during a deposition cycle.

13. (Original) The method according to Claim 12, wherein the receiving step includes receiving first optical radiation signal from a center of the wafer and a second optical radiation signal from an edge of the wafer.

14. (Original) The method according to Claim 13, wherein the controlling step includes keeping the first and second optical radiation signals constant from an onset of the deposition.